

IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please **AMEND** the claims according to the following.

1-5. (CANCELLED)

6. (CURRENTLY AMENDED) A process of user authentication in a client computing apparatus, comprising:

executing, in the client computing apparatus, a web browser that processes a protected web page to be received from network;

storing on an integrated circuit card a certificate to access the protected web page received in the client computing apparatus and characteristic identifying information of a user ~~associated with the received protected web page~~;

issuing by the web browser a certificate request to the user, in response to the receipt of the protected web page by the web browser of the client computing apparatus;

reading by an integrated circuit card reader the integrated circuit ~~card~~, in response to the issuing of the certificate request by the web browser~~receipt of the protected web page by the web browser of the client computing apparatus;~~

comparing identifying information input by the user with the characteristic identifying information of the user stored in the integrated circuit card; and

in response to the comparing, providing the certificate stored on the integrated circuit card to the web browser of the client computing apparatus to access the received protected web page.

7. (CANCELLED)

8. (CURRENTLY AMENDED) An integrated circuit card storing authentication information used to authenticate a user, comprising:

- an interface unit exchanging information with an external device of the user;
- a memory unit storing certificates to access protected web pages received by the external device and processed by the external device;
- a memory unit storing characteristic identifying information of the user associated with the protected web pages received by the external device;
- a comparing unit comparing identifying information received from the external device with the characteristic identifying information of the user stored in the memory unit of the integrated circuit card, in response to issuance of a certificate request by the web browser to a user; and
- a processing unit supplying one of the certificates to the external device to access by the user a corresponding one of the protected web pages received by the external device, in response to a result of the comparing.

9-10. (CANCELLED)

11. (CURRENTLY AMENDED) A user authentication computer system, comprising:

a computer, comprising:

- an integrated circuit card reader, and
- a programmed computer processor communicating with a network and executing, in the computer, a web browser that processes a protected web page received from the network, the web browser issuing a certificate request to a user, in response to the receipt of the protected web page by the web browser from the network; and
- an integrated circuit card read by the integrated circuit card reader and storing a certificate to access the protected web page received in the computer and storing characteristic identifying information of a user associated with the web page, and storing at least one program performing a process comprising:

comparing identifying information input by the user with the user characteristic identifying information stored on the integrated circuit card, in response to the issuing of the certificate request by the web browser to the user, and

in response to the comparing, providing the stored certificate to the web browser of the computer to access the protected web page received in the computer.

12. (PREVIOUSLY PRESENTED) The computer system of claim 11, wherein the computer further comprises a display unit and the integrated circuit card program further performs:

displaying on the display unit selectable names of protected applications as protected web pages, if a result of the comparing of the user identifying information is matching; and

the providing of the stored certificate comprises providing one of a plurality of certificates stored on the integrated circuit card and corresponding to a selected one of the protected applications by the user to the web browser to access the selected protected application.

13. (PREVIOUSLY PRESENTED) The computer system of claim 12, wherein the integrated circuit card stores information about the protected applications and the selectable names of the protected applications are provided to be displayed on the display unit, if the result of the comparing of the user identifying information is matching.

14-20. (CANCELLED)

21. (PREVIOUSLY PRESENTED) The process of claim 6, further comprising:
displaying, by the integrated circuit, on a display unit selectable names of protected applications, as protected web pages received in the client computing apparatus, if a result of the comparing of the user identifying information is matching; and

the providing of the certificate stored on the integrated circuit comprises providing to the web browser of the client computing apparatus, one of a plurality of certificates stored on the integrated circuit card that correspond to a selected one of the protected applications by the user to access by the client computing apparatus the selected protected application.

22. (PREVIOUSLY PRESENTED) The process of claim 21, further comprising storing in the integrated circuit card information about the protected applications, and providing the selectable names of the protected applications to be displayed on the display unit, if the result of the comparing of the user identifying information is matching.

23. (PREVIOUSLY PRESENTED) The process of claim 21, further comprising:
storing, in the integrated circuit card, an application identifier identifying a protected
application to display a selectable name of the protected application, and a user identifier and
password as the characteristic identifying information of the user associated with the protected
applications as the protected web pages received in the client computing apparatus.